MAINE LEARNING

TECHNOLOGY INITIATIVE

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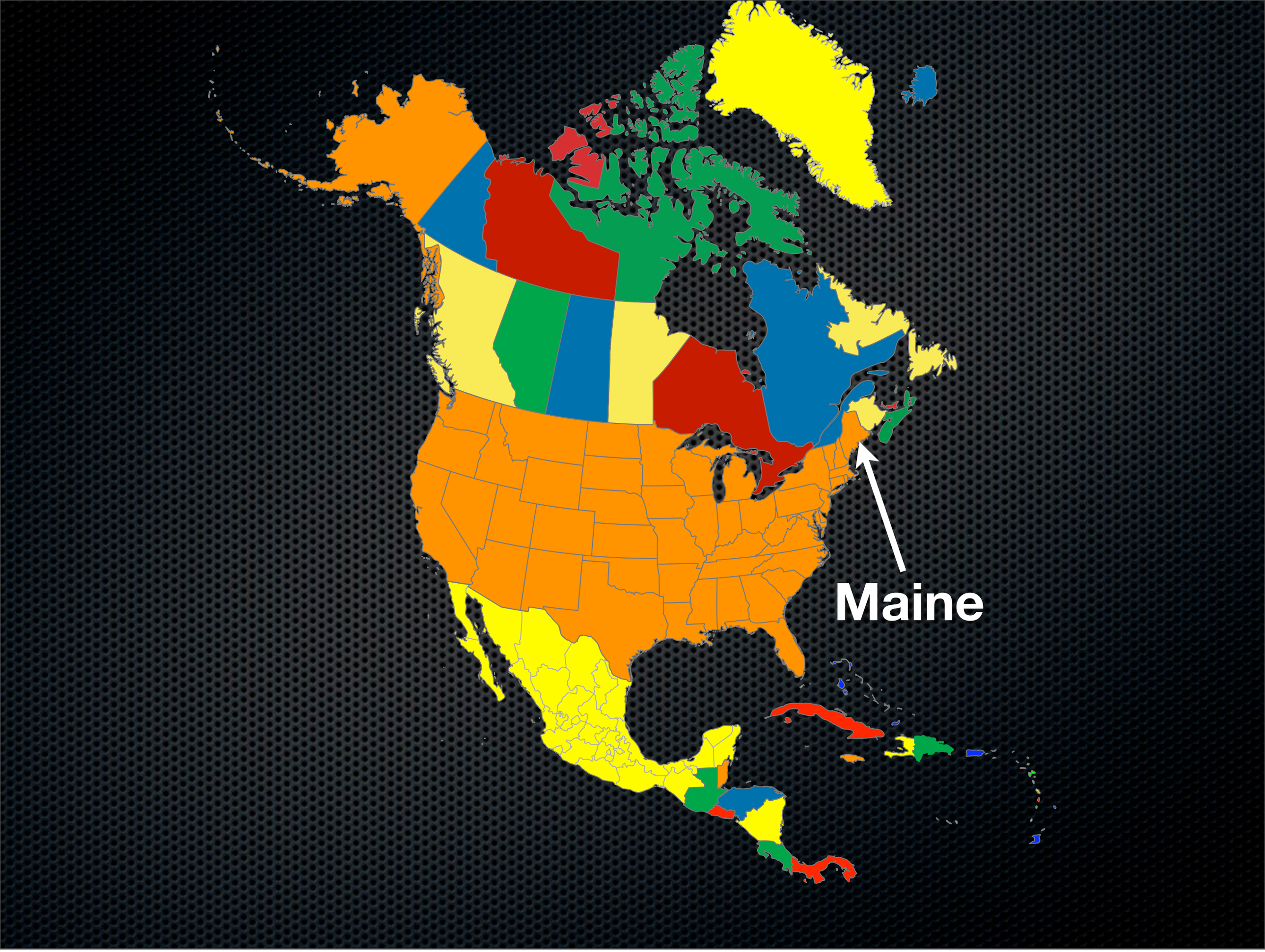
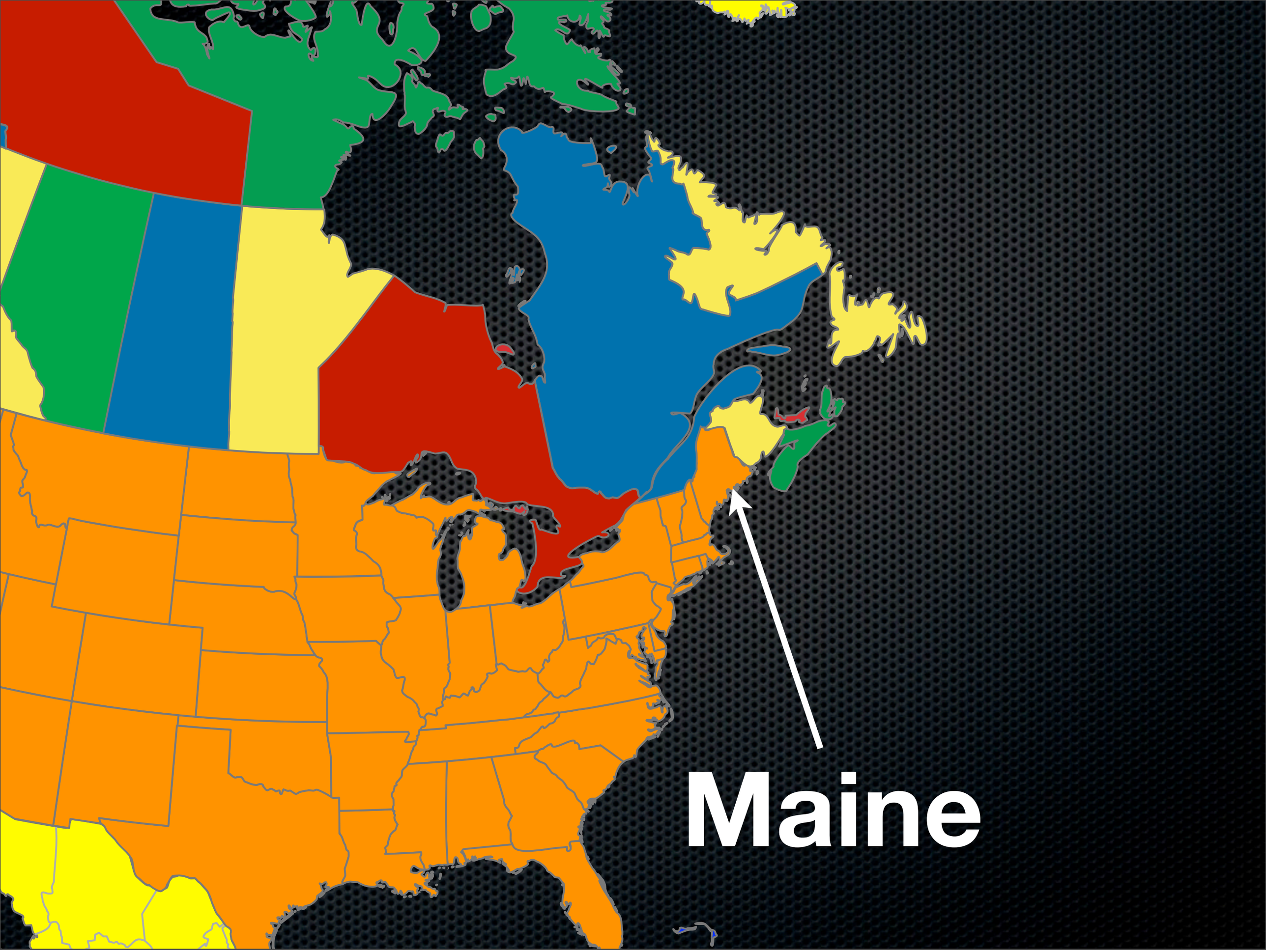
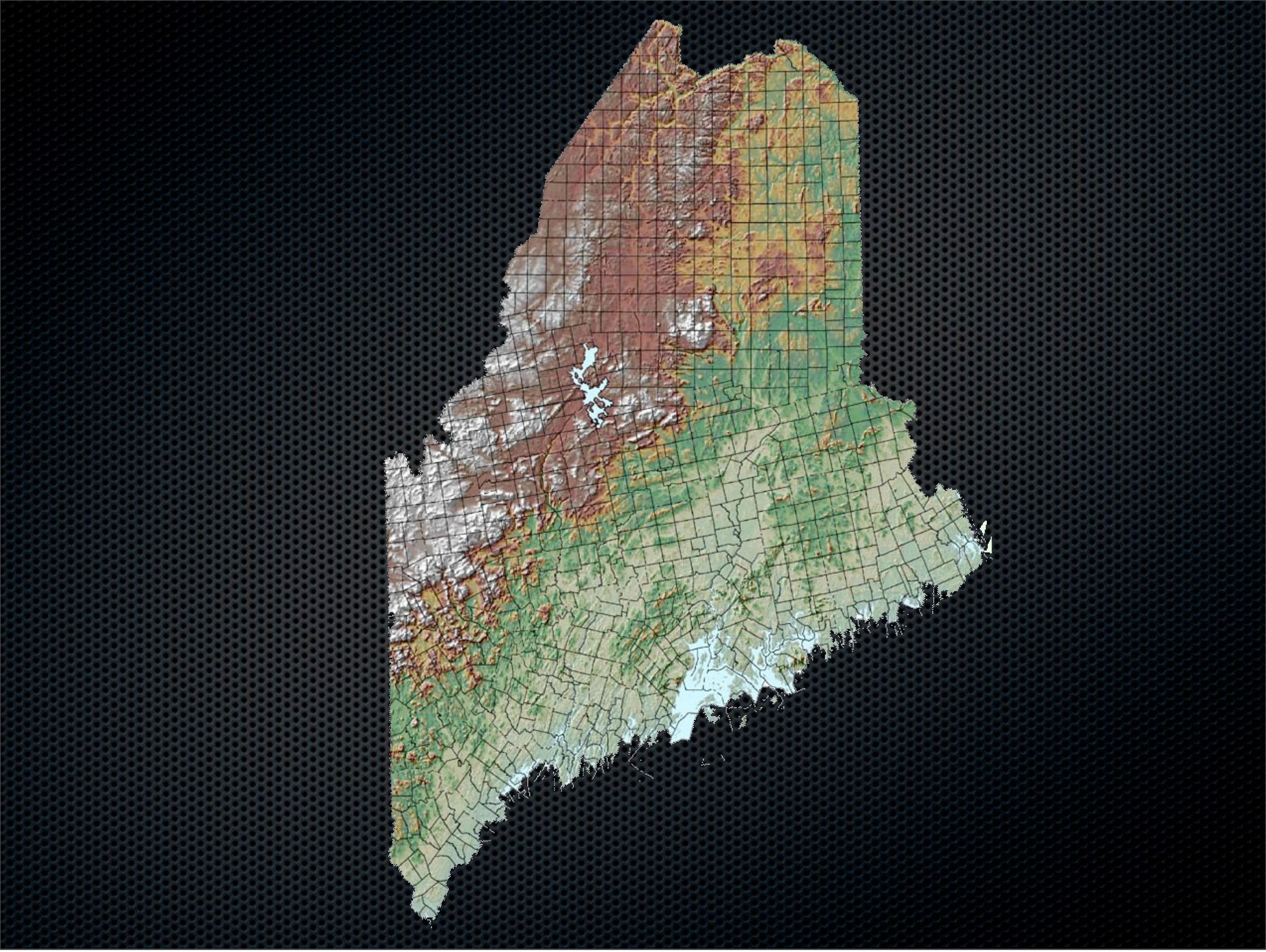
At the Point of Learning: Maine's 1:1 Learning Program

Jeff Mao
Learning Technology Policy Director
State of Maine
Department of Education


Maine


Maine



Sunday, November 15, 2009

Maine - by the numbers

- State of Maine
  - Land: 91,646 km^2 (Zhejiang Province: 101,800 km^2)
  - Total population: 1.3 million
    - Student population (K12): 187,000
- Maine Learning Technology Initiative
  - Schools: 373 secondary schools
    - 7-8: 100% | 9-12: 55%
    - ~70,000 laptops

MLTI Goals

- Equity
- Integration with Maine's *Learning Results*
- Sustainability/Avoiding Obsolescence
- Teacher Preparation and Professional Development
- Economic Development

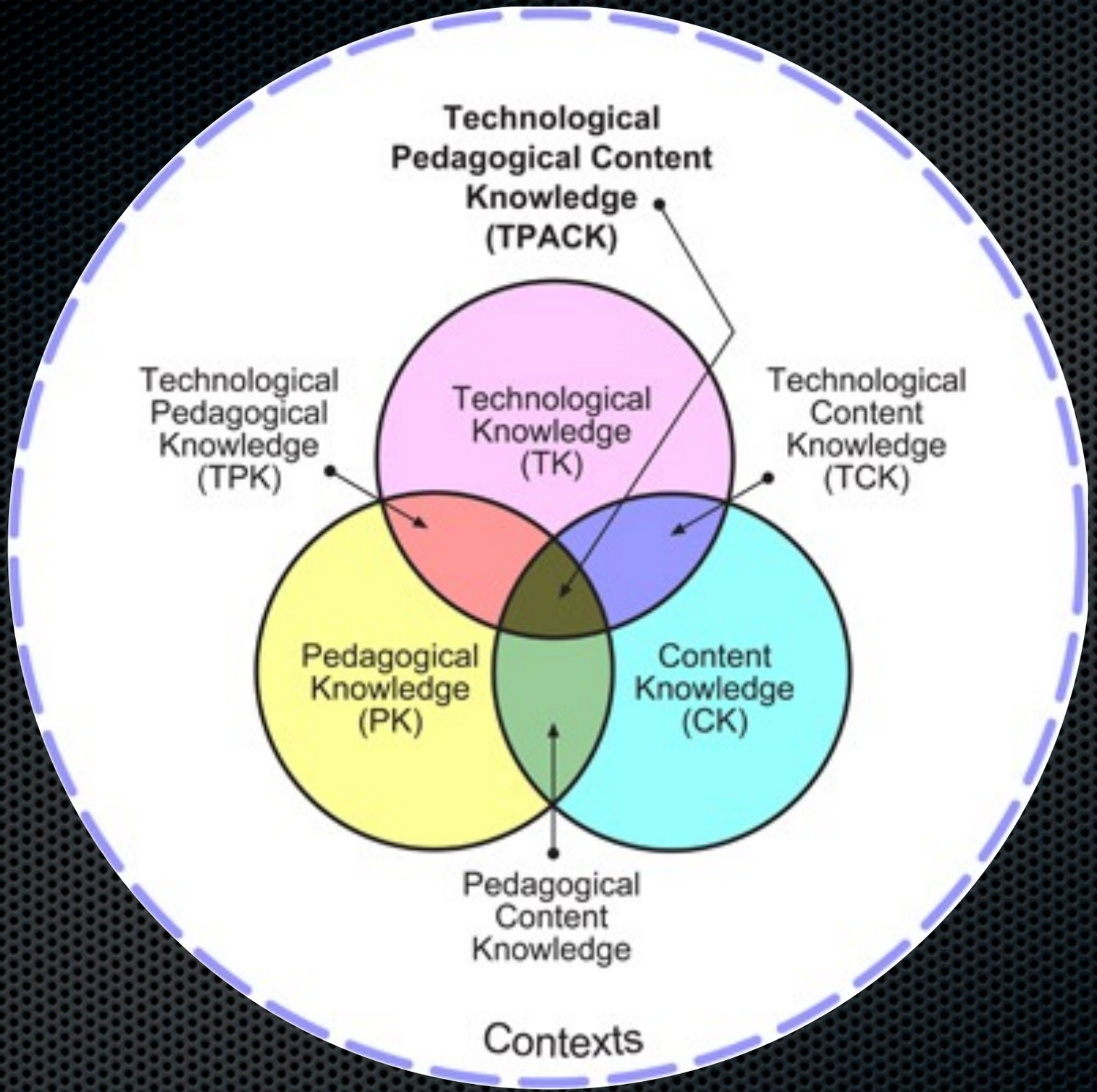
MAINE LEARNING
MLTI
TECHNOLOGY INITIATIVE

“A personal digital device, at the point of learning, as defined by the student.”

Susan Gendron
Maine Department of Education
Commissioner of Education

Defining “Technology Integration”

- Integration with Maine’s Learning Results
- Teacher Preparation and Professional Development



Dr. Matthew Koehler and Dr. Punya Mishra

http://www.tpck.org

SAMR

Dr. Ruben Puentadura

http://www.mlti.org/presentations

http://www.hippasus.com/resources/tte/

Augmentation

Acts as a direct tool substitute, with functional improvement

Substitution

Acts as a direct tool substitute, with no functional change

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Acts as a direct tool substitute, with functional improvement

Substitution

Acts as a direct tool substitute, with no functional change

Redefinition → Allows for the creation of new tasks, previously inconceivable

Modification → Allows for significant task redesign

Augmentation → Acts as a direct tool substitute, with functional improvement

Substitution → Acts as a direct tool substitute, with no functional change

F2F Sessions

DS

MM

RP

UDL

WP

What's on Your MacBook? *(podcasts)*

Lenses *(webinars/podcasts)*

TPCK/SAMR *(podcasts)*

Other Podcasts

5 Lenses

- [DS] Digital Story Telling and Media Production
- [MM] Making Meaning
- [RP] Research Process
- [UDL] Universal Design for Learning and Accessibility
- [WP] Writing Process

Maine Learning Technology Initiative

http://maine121.org/

Maine Learning Technology Initiative

MAINE LEARNING TECHNOLOGY INITIATIVE

Professional Development for Teachers

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Type text to search here...

Welcome to Maine121.org

August 19, 2009 Jeff Mao 4 comments

Welcome to Maine121.org, the new online home of professional development resources for teachers participating in the Maine Learning Technology Initiative (MLTI). For the past 7 years, MLTI professional development specialists (aka Statewide Integration Mentors [SWIMs]) have hosted school and regional workshops all over Maine. The SWIMs will continue to host these types of events, but this year we will be emphasizing online opportunities to reach more teachers more often.

Each week, MLTI will host at least one live webcast (or webinar). Online webcasts will allow you to participate from any broadband Internet connection. These workshops will continue to build upon our past work with the TPCK and SAMR models. Through five lenses, we will examine the effective use of technology as a teaching and learning tool.

Information about how to participate in these weekly events and a schedule is available by following the WebCasts link at the top of the blog. Follow up information and links to recordings of the presentations on iTunes U will be posted here. We encourage you to share your thoughts and ideas here on the blog as well.

Digital Storytelling and Media Production, Making Meaning, Research Process, UDL and Accessibility, Writing Process

November 5 Webinar: Directed Use of Research Tools

October 31, 2009 Jim Wells Leave a comment

The entry points for locating information can be the key to finding appropriate, detailed and timely resources. With simple modification of practice, and more directed querying, online tools and applications on the MLTI image can become powerful additions to the research process. This webinar will examine search tools both familiar and less

RSS feed

MAINE LEARNING MLTI TECHNOLOGY INITIATIVE

Lenses

- Digital Storytelling and Media Production (3)
- Making Meaning (2)
- Research Process (3)
- UDL and Accessibility (4)
- Writing Process (5)

Tag Cloud

accessibility brainstorm brainstorming built-in access CRP digital storytelling ideas prewriting quick write research Research Process tags tools udl vocabulary webinar word processing writing writing prompt

http://www.maine121.org

iTunes
mlti
LIBRARY
Music
Movies
TV Shows
Podcasts
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iTunes Store
SHARED
Home Sharing
GENIUS
Genius
PLAYLISTS
iTunes DJ
90's Music
Classical Music
Music Videos
My Top Rated
Recently Added
Recently Played
Top 25 Most Played
Music
Movies
TV Shows
App Store
Podcasts
Audiobooks
iTunes U
Sign In
STATE OF
MAINE
DEPARTMENT OF EDUCATION
TOP DOWNLOADS
005 Graphing calculator functions/features
What's on Your MacBook? OmniFocus
Teaching and Learning with GeoGebra: Introducti...
Geometric Series Example #1
GeoGebra: Algebraic Input
LINKS
Maine Department of Education
Maine Learning Technology Initiative
PARTNER CONTENT PROVIDERS
Portland Ovations
Maine Humanities Council
EcoScienceWorks
The Maine Writing Project
MAINE DEPARTMENT OF EDUCATION
Commissioner Susan A. Gendron
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MAINE LEARNING TECHNOLOGY INITIATIVE

iTunes U

Role-based Professional Development

- Teacher
- Technology Support
- Leadership

Procurement and funding

- Sustainability/Avoiding Obsolescence

Request For Proposals/ Contract

- http://www.mlti.org/rfp
  - Focus on Educational Outcomes
- Contract for Services
  - For copies of the contract, please contact Jeff Mao, Jeff.Mao@Maine.Gov directly

Request for Proposals

- Support educational goals
- non-specific - define the challenges and outcomes, not the solution
- Allow the vendors to flexibility to provide innovative solutions
- Allow for exceptions with functional equivalent solutions

Request for Proposals

- No student without a device for more then one school day
- Tools to support educational needs:
  - writing
  - data analysis
  - presentations and publishing,
  - multimedia creation
  - information management
  - research
  - communication
  - collaboration

It's about Education, not the Technology

- Dedicated Repair Facility
- Help Desk
- Online Dispatching and Tracking
- Spare devices
- Backup
- Performance and Functional Warranty
- Battery Replacements
- Robust Wireless Network for 1:1

Funding

- $242 per seat per year for 4 years
  - includes professional development, devices, software, battery protection and recycling, warranty, repairs, replacements, in-State project team, help desk, technical support, custom software image development, virtual learning environment, backup, asset management
- Maine State appropriates as part of General Purpose Aid for schools, funding for 7/8th grade students and 7-12th grade teachers and administrators
- School Districts allocate local budget for 9-12th grade students
  - EPS Targeted Technology Funds Allocation
  - Local = Local Sources, State Aid, Federal Aid

Infrastructure

- Ubiquitous wireless network in the school
- Broadband
  - Minimum 1.54Mbps --> 3 Mbps, prefered 100Mbps
  - Universal Services - ERate
  - Maine Telecommunications Education Access Fund (MTEAF)
  - Broadband Technology Opportunities Program

1:1 Ecosystem

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Student	**a personal digital device, at the point of learning, as defined by the student**

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Teacher	**TPCK-SAMR**

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Professional Development	**Classroom focused, role-based**

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Technical Support	**Embedded, Student/Teacher centric**

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Infrastructure	**Wireless & Ubiquitous**

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Leadership	Pressure and Support

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Infrastructure	Wireless & Ubiquitous
Leadership	Pressure and Support
21st Century Tools	Portable, professional, robust. Foster collaboration and communication

Research and Evaluation

20th Century Tools in a 21st Century World

20th and 21st Century Questions

20th and 21st Century Questions

20th C

Who?

What?

Where?

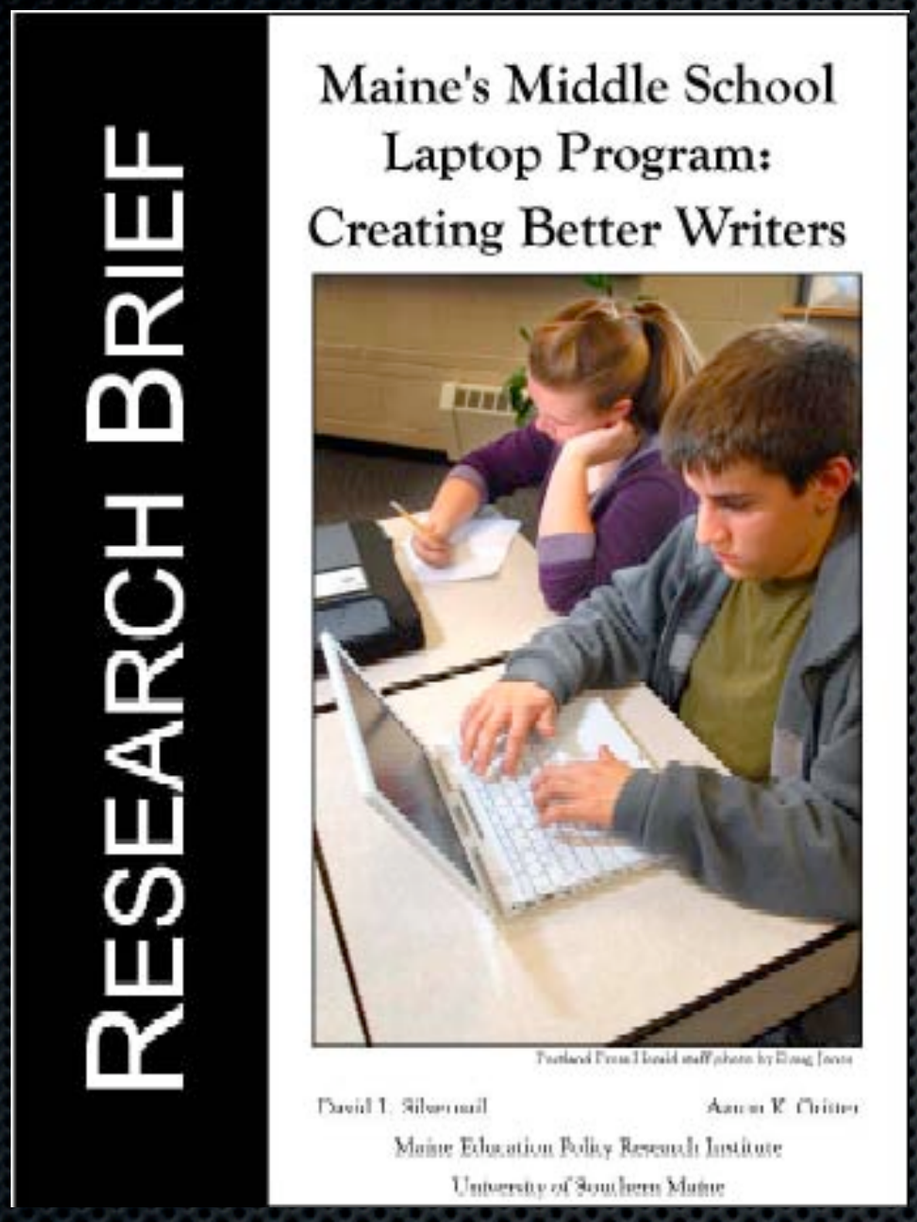
When?

20th and 21st Century Questions

20th C	21st
Who?	Why?
What?	How?
Where?	
When?	

Gains in Student Achievement

Writing

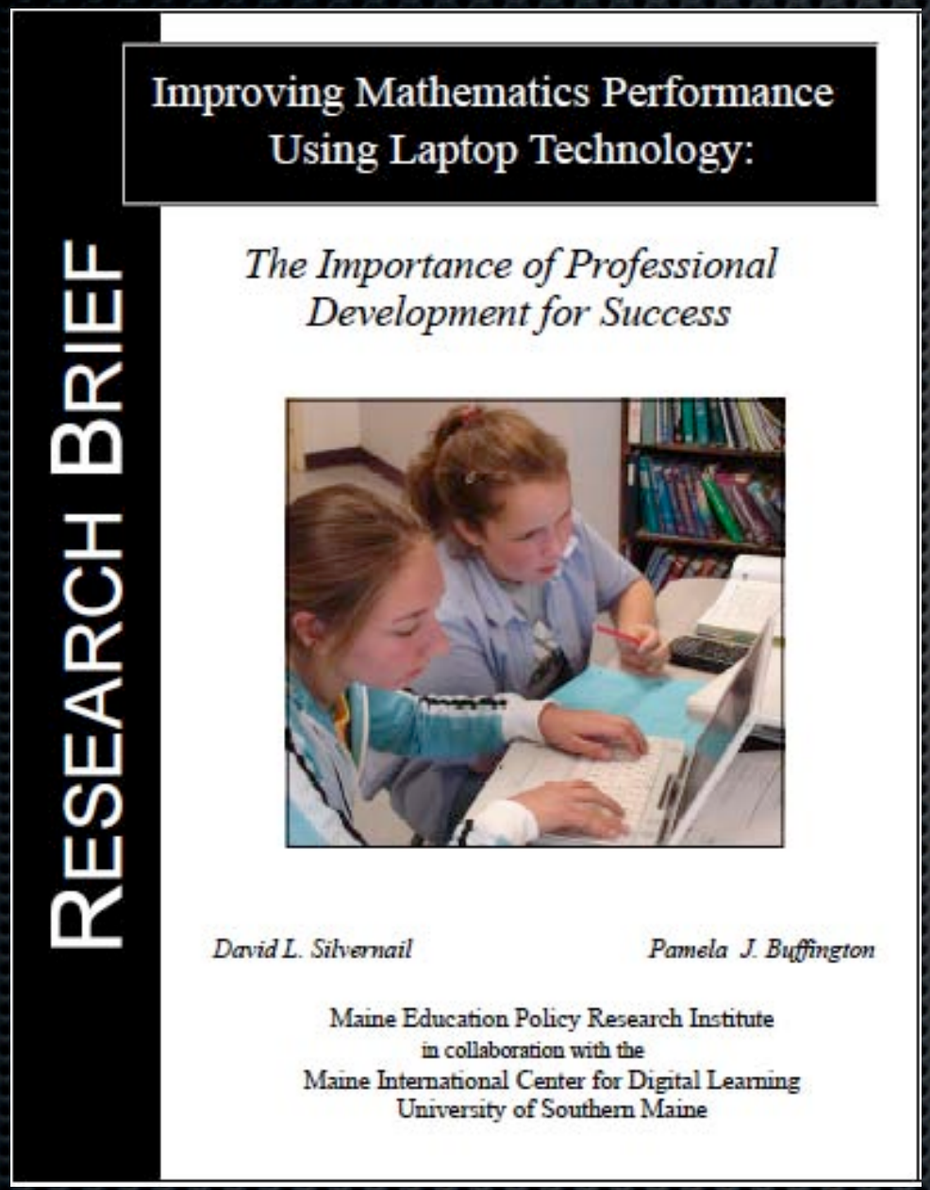


- Compared before and after 1-to-1 implementation
- Writing scores on MEA improved approximately 1/3 of a standard deviation
- Twice as many students using laptops for all stage of writing process met proficiency standard
- Improvements were independent of test format – online or paper and pencil.

http://usm.maine.edu/cepare/

Gains in Student Achievement

Math



- 2-year study that included professional development for teachers in experimental group
- Improvement in teachers' knowledge and practice with technology
- Improvement in students' scores on tests designed for study and on MEAs.

http://usm.maine.edu/cepare/

Formative assessment

versus

Summative assessment

Lessons learned

- Leadership Leadership Leadership
- F2F PD is great, but not scaleable and it's expensive
- Centralized State contract
  - "one throat to choke" works
- 1:1 is an ecosystem

http://www.mlti.org/presentations